

Serial No. 10/031,218

Art Unit: 3773
Examiner: Darwin P. Erez**IN THE CLAIMS:**

1. (Currently Amended) A surgical clip, comprising an elongate upper jaw and an elongate lower jaw attached together at a first hinge end, the lower jaw being provided with latching means at an opposite end to the hinge, the jaws being provided with a silicone rubber lining on either the upper or lower jaw or both jaws, in which the upper jaw comprises an arcuate shaped section characterised in that the upper jaw comprises a complex shape comprising a first substantially straight section adjacent to the hinge and a second arcuate shaped section adjoining the straight section and in which the second arcuate shaped section comprises a first arcuate shaped portion adjacent to said substantially straight section and a second arcuate shaped portion adjacent to said first arcuate shaped portion at an opposite end of said first arcuate shaped portion to said substantially straight section, said first and second arcuate shaped portions each having inner and outer surfaces, said first arcuate shaped portion having a first radius of curvature on at least its inner outer contact surface that is substantially greater than the radius of curvature of said second arcuate shaped portion on at least its inner surface and which has a second radius of curvature; and wherein a center of the radius of curvature for both the first and second arcuate shaped portions is located on the same side of the upper jaw.

2. (Previously Presented) A surgical clip as claimed in Claim 1, in which the arcuate section comprises a third generally straight section adjacent to said second arcuate shaped portion at the opposite end of said second arcuate shaped portion to the hinge, said generally straight section, when in the closed position of the clip interlocking under the latching section of the lower jaw.

3. (Original) A surgical clip as claimed in Claim 2 in which said first radius of curvature is of the order of three times that of the second radius of curvature.

Serial No. 10/031,218

Art Unit: 3773
Examiner: Darwin P. Erez

4. (Previously Presented) A surgical clip as claimed in claim 1 further including a distal generally straight section adjacent to said second arcuate shaped portion at the opposite end of said second arcuate shaped portion to the hinge, said distal generally straight section including a free end that extends in a direction distally of said hinge.

5. (Previously Presented) A surgical clip as claimed in claim 1 wherein said first arcuate shaped portion has the same width therealong and as measured in the direction of the first radius of curvature.

6. (Previously Presented) A surgical clip as claimed in claim 1 wherein said second arcuate shaped section has the same width therealong and as measured in the direction of the second radius of curvature.

7. (Previously Presented) A surgical clip as claimed in claim 1 further having on said upper jaw a distal generally straight section contiguous with said second arcuate shaped portion.

8. (Previously Presented) A surgical clip as claimed in claim 7 wherein the distal generally straight section includes a free end.

9. (Previously Presented) A surgical clip as claimed in claim 8 wherein, when the upper jaw is distorted it fits within the latch means because an initial closure pressure is imposed on the straight section and thus the initial pressure fails to distort the arcuate shaped section until the free end has been depressed toward the lower jaw.

Serial No. 10/031,218

Art Unit: 3773
Examiner: Darwin P. Erez

10. (Previously Presented) A surgical clip as claimed in claim 1 in combination with a clip closure member and wherein an initial closure pressure is imposed by the closure member only on the straight section.

11. (Previously Presented) A surgical clip as claimed in claim 1 wherein the first arcuate shaped portion is contiguous with the second arcuate shaped portion and wherein the center of the radius of curvature for both the first and second arcuate shaped portions is located on the opposite side to the outer contact surface.

12. (Previously Presented) A surgical clip as claimed in claim 1 wherein there is an absence of any straight portion between said first and second arcuate shaped portions.

13. (Previously Presented) A surgical clip as claimed in claim 1 wherein the upper and lower jaws are connected at a hinge pin.

14. (Currently Amended) A surgical clip as claimed in claim 1 including a tubular storage member and wherein the surgical clip is constructed and arranged for passage through a the tubular member to a captive opening.

15. (Previously Presented) A surgical clip as claimed in claim 14 wherein the tubular member has a dimension H that is less than the dimension of the captive opening W.

16. (Previously Presented) A surgical clip as claimed in claim 1 wherein the first arcuate shaped portion is contiguous with the second arcuate shaped portion forming a complex contiguous curved shape.

Serial No. 10/031,218

Art Unit: 3773
Examiner: Darwin P. Erez

17. (Previously Presented) A surgical clip as claimed in claim 1 wherein said second arcuate shaped section has an arcuate surface on both the outer contact surface thereof and an inner surface thereof.

18. (Currently Amended) A surgical clip, comprising an elongate upper jaw and an elongate lower jaw attached together at a ~~first~~ hinge ~~end~~, the lower jaw being provided with latching means at an opposite end to the hinge, in which the upper jaw comprises an arcuate shaped section characterised in that the upper jaw comprises a complex shape comprising a first substantially straight section adjacent to the hinge and a second arcuate shaped section adjoining the straight section and in which the second arcuate shaped section comprises a first arcuate shaped portion adjacent to said substantially straight section and a second arcuate shaped portion adjacent to said first arcuate shaped portion at an opposite end of said first arcuate shaped portion to said substantially straight section, said first and second arcuate shaped portions each having inner and outer surfaces, said first arcuate shaped portion being contiguous with said second arcuate shaped portion and said first arcuate shaped portion having a radius of curvature on at least its ~~outer~~ inner contact surface that is different than the radius of curvature of said second arcuate shaped portion on at least its inner surface and which has a second radius of curvature; and wherein the first radius of curvature and the second radius of curvature are both defined by respective centers of curvature located below the upper jaw so that both of the radii of curvature are in the same direction.

19. (Previously Presented) A surgical clip as claimed in claim 18 wherein the first arcuate shaped portion has its radius of curvature greater than the radius of curvature of the second arcuate shaped portion.

20. (Previously Presented) A surgical clip as claimed in claim 19 wherein there is an absence of any straight portion between aid first and second arcuate shaped portions and wherein

Serial No. 10/031,218

Art Unit: 3773
Examiner: Darwin P. Erez

said second arcuate shaped section has an arcuate surface on both the outer contact side thereof and the inner side thereof.

21. (Previously Presented) A surgical clip as claimed in claim 18 wherein at least one of said upper and lower jaws is provided with a silicone rubber lining.

22. (Previously Presented) A surgical clip as claimed in claim 21 wherein both of said jaws are provided with a silicone rubber lining.

23. (New) A surgical clip as claimed in claim 1 wherein the first arcuate shaped portion is contiguous with the second arcuate shaped portion and wherein said first and second arcuate shaped portions have the same width therealong.

24. (New) A surgical clip as claimed in claim 23 wherein the straight section is contiguous with the first arcuate shaped portion and has the same width therealong.

25. (New) A surgical clip as claimed in claim 24 wherein the straight section extends to the hinge.

26. (New) A surgical clip as claimed in claim 1 wherein the straight section has proximal and distal ends and the straight section has the same width between the proximal and distal ends thereof.

27. (New) A surgical clip as claimed in claim 26 wherein the straight section has inner and outer surfaces that are both substantially flat.

Serial No. 10/031,218

Art Unit: 3773
Examiner: Darwin P. Erez

28. (New) A method of controlling the application of a surgical clip through a tubular applicator wherein the surgical clip is comprised of an elongate upper jaw and an elongate lower jaw attached together at a hinge, the lower jaw being provided with latching means at an opposite end to the hinge, the jaws being provided with a silicone rubber lining on either the upper or lower jaw or both jaws, in which the upper jaw comprises an arcuate shaped member forming a complex shape that includes a first substantially straight section having proximal and distal ends and pivotal at the hinge, an arcuate shaped section contiguous with the distal end of the straight section and a free end section contiguous with the arcuate shaped section, said method of controlling comprising, passing the surgical clip through the tubular applicator to an exit end thereof and applying a contact pressure at the exit end and only to the distal end of the straight section whereby the upper jaw is distorted so that the free end section thereof engages with the latch means but without any distortion of the arcuate shaped section of the surgical clip.

29. (New) The method of claim 28 including forming the arcuate shaped section as a first arcuate shaped portion adjacent to said straight section and a second arcuate shaped portion adjacent to said first arcuate shaped portion at an opposite end of said first arcuate shaped portion to said straight section, said first arcuate shaped portion having a first radius of curvature on at least its outer contact surface that is substantially greater than the radius of curvature of said second arcuate shaped portion which has a second radius of curvature.

30. (New) The method of claim 29 including providing the radius of curvature for both the first and second arcuate shaped portions located on the same side of the upper jaw.